

Development of 4D Dynamic Simulation Tool for the Evaluation of Left Ventricular Myocardial Functions

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Abstract : Cardiovascular disease can be detected by measuring the regional and global wall motion of the left ventricle (LV) of the heart; In this study, we designed a dynamic simulation tool using Computed Tomography (CT) images to assess the difference between actual and simulated left ventricular functions. Thirteen healthy subjects were involved in the study with actual and simulated left ventricular functions. In this research, we found the high correlation between actual left ventricular wall motion and simulated left ventricular wall motion. Our results confirm that our simulation tool is feasible for simulating left ventricular motion.

Keywords : cardiac imaging, left-ventricular remodeling, cardiac wall motion, myocardial functions

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